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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,516	10/25/2002	Rodolfo Paillaman	24-NS-123144	2138

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JOHN S. BEULICK
C/O ARMSTRONG TEASDALE, LLP
ONE METROPOLITAN SQUARE
SUITE 2600
ST LOUIS, MO 63102-2740

EXAMINER

PALABRICA, RICARDO J

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,516

Applicant(s)

PAILLAMAN ET AL

Examiner

Rick Palabrica

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 3,4,7,8,13,14,17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,9-12,15,16,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 10 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's election with traverse of Species A (with claims 1, 2, 5, 6, 9-12, 15, 16, 19 and 20 readable thereon) in Paper No. 8 is acknowledged. Applicant's traversal of the species election requirement was on the grounds that the species are "related." The reason is not found persuasive because species belonging to one genus are related but it does not follow that they are not patentably distinct. Also, contrary to the requirement in said Office Action, applicant did not submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on record that this is the case.

The restriction requirement is still deemed proper and is therefore made **FINAL**.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 2, 5, 6, 9-12, 15, 16, 19 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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The claims recite a step of "positioning at least one ultrasonic phased array probe adjacent the bottom surface of the jet pump beam." There is neither an adequate description nor enabling disclosure as to how and in what manner the so-called "positioning" is done to ensure that the system will properly operate. Note that the jet pump assembly, including the beam, is subjected to coolant flow. It is unclear how the probe is positioned and held in place such that it will not be swept away by the coolant current and its readings not be affected by flow vibrations.

The claims also recite a step of "scanning the jet pump beam with at least one ultrasonic phased array probe." The term "scanning" is neither used nor defined in the specification. Scanning can mean moving a probe about a stationary object being examined in the same manner as an airport screener scans a passenger with a portable metal detector. Scanning can also mean the probe is stationary and the object to be examined is set in motion, e.g., an MRI examination. The context intended by the applicant for the term "scanning" is unclear.

3. Claims 1, 2, 5, 6, 9-12, 15, 16, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The reasons are the same as those stated in section 2 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 5, 6, 9-12, 15, 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Briere et al. (U.S. 4,394,345) in view of Johnson (U.S. 6,332,011 B1). De Briere et al. disclose the applicant's claims except for the specifics regarding phased array ultrasonic probes and their deployment for examination of jet pump beams.

De Briere et al. disclose an ultrasonic transducer apparatus and method for examining nuclear reactor jet pump beams for cracking (see Abstract). Note that the purpose of De Briere et al.'s invention is the same as applicant's invention (see, for example, paragraphs 0004 and 0005 of the specification). In fact, the figures in De Briere et al. and in the specification are nearly identical (e.g. Fig. 1 in De Briere et al. vs. Fig. 2 in the specification, Fig. 2A in De Briere et al. vs. Fig. 3 in the specification, etc.). Fig. 2A in De Briere et al. clearly illustrates a beam arm comprising a transition portion and a radiused portion located adjacent the transition portion, as recited in claim 11.

De Briere et al. also disclose examining the jet pump beam for cracks from below (see column 6, lines 3+). They further state that transducers of any suitable kind can be used for transmitting and receiving ultrasonic signals (see column 6, lines 19+).

Johnson teaches the use of a phased array ultrasonic probe to inspect for signs of cracking in the shroud of a boiling water reactor. He also teaches that more extensive and reliable testing for cracking can be done using this probe (see column 1, lines 58+).

One having ordinary skill in the art would have recognized that both references are in the same field of endeavor, i.e., ultrasonic testing for potential cracks in nuclear components, and that the teaching in Johnson would be applicable to De Briere et al.

As to the limitations in the claims regarding: a) the use of two ultrasonic phased array probes, i.e., a first probe for examining a first jet pump beam and a second probe for examining a second jet pump beam; or b) re-positioning a probe from one arm of the beam to its second arm, these are cases of duplication of parts having the same function. See MPEP 2144.04. VI. B that states: "[M]ere duplication of parts has no patentable significance unless a new and unexpected result is produced."

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, as disclosed by De Briere et al., to use at least one ultrasonic phased array probe for scanning a first jet pump beam arm, and then re-positioning it to scan a second jet pump beam arm such that the scanned volume comprises an area extending from the bolt opening to the end of a beam arm and extending from the top to the bottom surface of a beam, to gain the advantages thereof (i.e., more extensive and reliable examination), because such modification is no more than the substitution of one ultrasonic testing apparatus and method by another well known ultrasonic testing apparatus and method within the nuclear art.

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Claim Objections

5. Claims 10 and 20 are objected to because of the following informalities: The words "and" and "that" on lines 4 and 5, respectively, in claim 10, and lines 5 and 7, respectively, in claim 20, are probably superfluous. Appropriate correction is required.

Conclusion

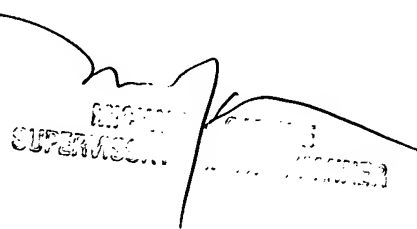
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References B and C further illustrate prior art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 703-306-5756. The examiner can normally be reached on 7:00-4:30, Mon-Fri; 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

RJP
July 7, 2003


SUPERVISOR